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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/422,264	04/14/95	GERARDUS DE VRIES J	P/1034-54

E3M1/1218

JAMES A FINDER  
OSTROLENK FABER GERB AND SOFFEN  
1180 AVENUE OF THE AMERICAS  
NEW YORK NY 10036-8403

EXAMINER

DOLAN, R

ART UNIT

2306

PAPER NUMBER

7

DATE MAILED: 12/18/96

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

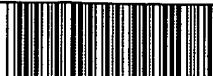
# Office Action Summary

Application No.  
**08/422,264**

Applicant(s)  
**De Vries**

Examiner  
**Robert J. Dolan**

Group Art Unit  
**2306**



☒ Responsive to communication(s) filed on Oct 4, 1996

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-20 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-20 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☒ The proposed drawing correction, filed on Oct 4, 1996 is ☒ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 2306

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1-5 and 7-14 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 112***

2. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim is rendered indefinite by the term "control logic." The "control logic" appears to merely receive data and does not appear to impart any functionality to the claimed shift register. It is unclear what the "control logic" is comprised of or what its intended function is.

### ***Claim Rejections - 35 USC § 102***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 5 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Doyle et al. Doyle et al discloses all features of the claimed invention.

Art Unit: 2306

5. With regard to claim 6, the rejection under 35 U.S.C. 102(b) as being anticipated by Cook et al made in the previous office action is considered proper, in view of the above rejection under 35 U.S.C. 112, second paragraph, and is therefor maintained.

*Claim Rejections - 35 USC § 103*

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 4 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Birman et al (Birman) in view of Wong et al (Wong).

Birman does not disclose applicant's claimed adjustable word length in the multiplier. Wong teaches a multiplier with an adjustable word length. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teachings of Wong to the apparatus of Birman so as to perform both fixed and floating point multiplication, as disclosed by Wong.

8. Claims 1-3, 7-12 and 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Birman in view of Wong, as applied to claims 4 and 19, further in view of Doyle et al (Doyle). Birman and Wong do not teach adjustable word lengths in an ALU. Doyle teaches the features of an ALU as claimed. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teachings of Doyle to the apparatus of Birman so as to permit efficient implementation of algorithms, as disclosed by Doyle.

Art Unit: 2306

With regard to claims 2, 9, 10, 12 and 15-18, as stated in the previous office action, a pipeline is defined by more than the number of stages or steps it contains. A claim simply of a five-step pipeline without definition of each step does not constitute a patentable difference over the prior art.

With regard to claims 7, 10, 11 and 14, as stated in the previous office action, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the circuits in integrated form since it was well known in the art that numerous benefits, such as reduced physical size, exist for integrated circuits.

With regard to claims 8 and 12-14, applicant alleges, on page 18, last paragraph of applicant's amendment dated October 1, 1996, that Birman does not teach or suggest separate busses for the transport of data to and from the ALU, the multiplier and the data storage registers, each having a register attached thereto. The Examiner refers applicant to Fig. 2 of Birman, in particular register file 12, to which separate busses, for example C Bus, from the ALU, and D Bus, from the multiplier, are connected. Further, it was known in the art at the time the invention was made to control bus activity via instruction registers. See, for example Vegesna et al.

With regard to claim 17, it was known in the art at the time the invention was made to implement Wallace trees in multipliers.

Art Unit: 2306

***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert J. Dolan whose telephone number is (703) 305-2875.



Robert J. Dolan  
Patent Examiner  
Art Unit 2306



Paul P. Gordon  
Primary Patent Examiner  
Art Unit 2306

PAUL P. GORDON  
PRIMARY EXAMINER  
GROUP 2300